Loudoun County
Strategy for Watershed Management Solutions (SWMS)

Meeting Summary

May 4, 2006
Best Western Hotel, Leesburg, VA

Project Overview
The Strategy for Watershed Management Solutions (SWMS-- or the Strategic Watershed Management Solutions) effort is designed to be iterative, adaptive, and collaborative in developing a county-wide plan to manage water resources in Loudoun County on a watershed basis. The consensus-building effort involves various groups including government agencies (county, state, and federal), active community and citizen groups, development and commercial groups, agricultural interests, and non-governmental organizations. The strategic plan will be used to develop a subsequent, comprehensive watershed management plan (CWMP).

Welcome and Updates
More than 40 people gathered for the third meeting of the Loudoun Strategic Watershed Management Solutions (SWMS) Stakeholders Team. Christine Gyovai and Tanya Denckla Cobb, meeting facilitators from the University of Virginia Institute for Environmental Negotiation (IEN), welcomed participants and provided an overview of the process, including a review of the protocols established for how the SWMS Team agreed to work together. The group reviewed the consensus decision making process to reaffirm that the group is working toward developing a consensus document, the Declaration of Cooperation. The group reviewed the March meeting summary and a variety of progress updates were given, which are below.

Loudoun County Supervisor Sally Kurtz pointed out that the scheduled June 6th date for the next SWMS meeting was also a Board of Supervisor's meeting date. Others said they would not be able to attend because of this scheduling conflict. In response, an alternate date of June 14th was set for the June SWMS meeting.

Kelly Baty, SWMS Project Manager for the County, informed the group that he has been in communication with Matt Meyers of Fairfax County who could not attend the meeting. He and Mr. Meyers wanted the team to know they were working on some language for the Declaration of Cooperation which would allow the two counties to cooperate and coordinate on watershed planning.

Bruce McGranahan, Loudoun County Planning Department, gave a brief update on his presentation of the SWMS process to County's Transportation and Land Use Committee on the 24th of April. He will be giving a presentation to many of the Towns in July at a Main Street meeting.

Kelly Baty informed the group that Traci Goldberg of the Fairfax Water Authority would be joining the next SWMS meeting in June. She would like to arrange for a SWMS update PowerPoint to be given at the next Fairfax Water Authority meeting on June 1st.

Linda Neri, Deputy Loudoun County Administrator, pointed out that until this process is over any presentations should emphasize that these are not official County views with Board of Supervisor approval. Ms. Neri also recommended that a presentation be given to the Northern Virginia Building Industry Association (NVBIA), perhaps at their next monthly association breakfast gathering. The facilitators did note that SWMS participant, George McGregor, was on the group representative for NVBIA and the National Organization of Industrial and Office Properties (NAIOP). Also, Mark Hassinger (NAIOB) and Michael Capretti (NVBIA) were both invited to participate in the SWMS Team, but opted to remain on the "informed" list.

Phil Daley of Loudoun Wildlife Conservancy mentioned that they will be initiating a new monitoring program, and that there is not much mention in the Declaration of Cooperation or draft work plan about vernal pools or road crossings. The SWMS Team supported including more detail about these items in the subsequent watershed plan.

Charlie Faust, BOS appointee to the Water Resources Technical Advisory Committee (WRTAC) pointed out that at the WRTAC meeting in April they had some discussion of the SWMS process and Declaration of Cooperation (DOC). The topic of the relationship between WRTAC and SWMS process was identified as something that should be further addressed. This topic was discussed at the SWMS meeting, and further information is below about the proposed relationship and structure of the committees.

Tanya Denckla Cobb provided an update on a meeting with Loudoun Board of Supervisor Kurtz, Supervisor Snow, and Deputy County Administrator Linda Neri, as well as project planning staff on May 1, 2006, where the main concepts in the DOC were reviewed. The Supervisors were generally very supportive of process, and provided helpful feedback on the DOC. Loudoun County Supervisor Stephen Snow affirmed this positive reception, adding that it is important that this process translate into action. He stated that Loudoun has made great strides in getting people to work together because it's "the right thing to do." Mr. Snow also stated that the County should grow the program to incorporate the Chesapeake Bay Standards to allow for program credibility and possible funding opportunities afforded by the adoption of the Chesapeake Bay Standards.

The opening and updates concluded with appreciation being expressed to those who had worked on the Ad Hoc committee in preparation for the May 4th meeting, and in particular to Darrell Schwalm of Loudoun Watershed Watch who convened the Ad Hoc committee and worked hard on the DOC and draft work plan.

Components of IEN's Final Report to Loudoun County

Christine Gyovai walked the group through the proposed elements of IEN's Final Report for the SWMS process. These elements are 1) Executive Summary and Summary of Strategy; 2) Declaration of Cooperation (DOC) including Quality Assurance Quality Control standards; 3) Watershed Inventory and Analysis of Watershed Activities; 4) Watershed Planning Work Plan; and 5) Appendices such as meeting summaries, participant lists, etc. The detailed list of these elements is attached below.

The Executive Summary portions and DOC were further discussed at a later point in the meeting. The group agreed that the draft Work Plan has been taken as far as it can by the SWMS Team, and that any further work on the Work Plan needs to be undertaken by the Steering Committee in the next phase of watershed planning.

Jason Espie of IEN gave an update of the inventory and introduced the need for an analysis of watershed activities. He presented a draft worksheet to provide an additional examination of information collected for the Watershed Inventory. The worksheet presented a number of proposed metrics to measure activities in the watershed, including linear feet of riparian buffers planted, or under conservation easement, acres of wetland preserved, etc. The group was asked to reflect on the metrics proposed in the worksheet: are these the correct measures, can they even be measured, and if not what would be proposed? The following discussion points, concerns, suggestions, and comments were made:

- Someone did not understand what was meant by "linear feet of floodplain setback." The intention of this was intended to measure areas classified as floodplain that would have development restrictions or limitations. Mr. Espie pointed out that these are just proposed metrics, and if they don't make sense then SWMS team members need to propose more accurate ways to measure watershed activities.
- The Piedmont Environmental Council said they have maps of acres of easement in a watershed, and could provide this.
- It was noted that the Environmental Protection Agency's (EPA) Tributary Strategies report has statistics and information that could be inserted into metric columns. Loudoun County staff have worked on these measurements. David Ward offered to help gather this information.
- The County has a number of environmental overlay districts such as mountainside, steep slopes, and limestone overlay areas that were measured as part of the Tributary Strategies efforts. These can be included in the inventory and measurement analysis. Alex Blackburn offered to help include these data.
- There was a question about how to measure citizen stewardship activities, including volunteer monitoring. It was suggested that appropriate metrics might include: the number of stream clean-ups, the number of miles cleaned, the number of volunteer monitoring sites, and number of times each site is monitored.
- Many watershed activities are on-going, but the purpose of the inventory and analysis is to establish a baseline of what is being done, or has been done.
- The group agreed that the analysis should only attempt to quantify activities in the last five years, since 2001.
- The inventory still needs activity costs to be included. Participants will need to provide this information to Mr. Espie.
- A concern was raised that the inventory might convey only work that has been done to improve the watershed, and might portray an inaccurate picture of the watershed by failing to portray how much watershed has been degraded. One participant suggested that the State of the Streams report can illustrate the degraded condition of the watershed. Another noted that this was not the intention of the inventory and analysis of watershed activities. Still, it should not convey the false impression that all is well with the watershed, and perhaps the Executive Summary could address this. Participants did

affirm that the inventory was still important for the watershed planning process as it represents a baseline of who-is-doing-what. The inventory can help identify what is being done and thus can help prioritize what needs to be addressed first.

- The group agreed that the inventory and analysis should focus just on activities and should provide rough measurements where possible. This analysis is not an attempt to analyze or precisely quantify every watershed activity in Loudoun County throughout history, but rather to understand what is happening today.
- It was pointed out that the LEIP (activity 2.02) is actually a Loudoun County project. Also activity 3.05 should not be in this inventory (it will be removed).
- Mr. Espie will contact individuals who have contributed to the inventory thus far. Just one point-person per activity will be contacted, to avoid redundancy. They will be emailed the Excel worksheet and will be asked to fill in the metrics columns or to provide some measurement for each activity as well as other information such as cost. Input on the inventory is requested by May 26, 2006, and should be sent to Jason at jespie@virginia.edu.

Declaration of Cooperation Review and Discussion

The facilitators turned the group's attention to the latest version of the Declaration of Cooperation (DOC). The DOC was projected on a screen for group editing and review. Live edits were made to the DOC, which is attached at the end of the meeting summary. General discussion points that emerged during this group editing session follow:

- Section I: Joe Gorney offered to rewrite the 'background' sentence which received some discussion because of concerns that it needed to be phrased more positively.
- Section II; Supervisor Snow stated that there is urgency for compliance with the Chesapeake Bay Preservation Act (CBPA), and the group agreed that additional language should be included in the DOC to reflect this. Darrell Schwalm and Todd Danielson offered to revise the DOC with this language.
- Section IV: In the Vision, there was some group discussion on the wording of "dictate value" for people vs. stating that people "have values." Some felt a future vision should not prescribe values for people. Some felt that in order to have a healthy environment, people need to value it. The group struggled with the difficult question of how to encourage a community to value for its different quality-of-life assets. After group discussion, Charlie Faust and Gem Bingol volunteered to re-draft the vision statement. The revised text reads as follows:

  " Loudoun County is a place where natural and cultural resources offer beauty and function. Residents and visitors enjoy clean drinking water, recreate in swimmable and fishable waters, and have access to diverse natural habitats. Loudoun's residents remain informed, energized, and involved in maintaining and protecting healthy watersheds. "

- In Section IV.C.4. there was discussion of wording around economic development opportunities. Someone suggested using 'appropriate' while others said that 'appropriate' is a word that lacks clarity. Joe Gorney offered to do some re-drafting for this point.

- Section IV.C.7: clarification is needed for recreational use of water resources. Does this mean people need to open up their properties to public access? Jim Christian worked with Charley Faust and David Ward to re-draft this statement.
- Section IV.C.9: there was discussion around what value is being conveyed by "agricultural heritage." It was pointed out that the County does not distinguish between agriculture and industry when it speaks of economic development. It was asked if the DOC could be more specific in its value statement concerning agricultural heritage and economic development. Ed Gorskey, Joe Gorney and Chris Van Vlack offered to re-draft text for these bullets.
- Section V: There was some discussion about regional watershed planning and cooperation with neighboring counties. In terms of regional watershed planning, should Loudoun not be focusing more on collaborating with *upstream* neighbors as that could have more beneficial impact on the quality of Loudoun's water? One member responded that Loudoun County is evaluated on the condition of the waters leaving, not entering, the county. Another member noted that contaminants in the Potomac do affect the cost of Loudoun drinking water. In addition, non-point source pollution contaminants in County stormwater are a strong factor affecting the quality of Loudoun water. Ms. Denckla Cobb summed up the discussion, saying that there seemed to be agreement on the need for greater regional cooperation – upstream and downstream – and there is a need to work more on how to cooperate or involve Fairfax County in the process. Kelly Baty will work with Matt Meyers to develop language on this issue. The language will also include cooperation with Prince Georges, Prince William and Fauquier Counties.
- Section V.4: There was some discussion over the concurrent watershed planning approach proposed. The concurrent approach seemed overwhelming to some people. For example, how long is Phase I going to last? Darrel Schwalm pointed out that Phase I is based on using existing data, and being able to start on activities immediately without having to collect more or new data.
- Modeling Section (2nd Section IV, but wrongly numbered): There was some concern that the modeling section was perhaps too prescriptive or detailed for this strategic planning effort. It was suggested that the future Steering Committee should ideally address these elements on a subcommittee level. Perhaps this section of the DOC could simply be culled down and made more general. It was acknowledged that modeling is a very major component of watershed planning, but mostly likely for Phase II. The decision was to summarize modeling briefly within the DOC, and to put most of the detailed recommendations in an Appendix.
- Data Management Section (2nd Section V): The central database/database coordinator issues received some discussion. It was pointed out that the County does not currently have the capability for funding this position. Supervisor Snow suggested not removing this request as the DOC contains several recommendations for funding which will need further consideration by the BOS; emphasizing the Chesapeake Bay Preservation Agreement (CBPA) obligations would be important toward this end. A cover letter or the Executive Summary to the BOS can then call attention to steps needed to implement the recommendations.
- Section XII, A.1. and A.2.: There was some discussion about the relationship between watershed planning and land use policies and tools. One participant stated that a watershed management plan should not be used to control land, nor should it be a land use document. Others pointed out that there are strong linkages between land use and

watershed issues and that the relationship needs to be addressed. Joe Gorney volunteered to submit new language that will address these concerns for consideration by the SWMS Team.

- Section XI.A.1.b: there was consensus that the DOC should serve both short and long term recommendations. Supervisor Snow said that compliance with the CBPA provides the justification needed for creating additional governmental positions and services, especially for many who have consternation over growing government. This issue would be received more positively if it is presented as a regulatory requirement with the CBPA as the motivating factor.

Executive Summary Discussion

Immediately following the lunch break, Tanya Denckla Cobb led discussion related to the Executive Summary of the DOC. A participant expressed that the Executive Summary should not be too narrowly focused on sourcewater protection as there are other important aspects of watershed planning.

One member requested clarification on the next steps in the watershed planning process and whether BOS approval is needed. Kelly Baty explained that approval of the BOS is not needed for funding the immediate next phase of watershed planning, as the BOS approved the original grant and staff is expected to fulfill the terms of the grant. A request for proposals (RFP) will be issued for a firm to develop a watershed plan according to the terms of the DOC, working with the Steering Committee that is to be formed, and using other information in the Final Report of the SWMS process. Participants noted that an RFP for continued work needs to specify the scope, focus and defined parameters of work.

A number of participants commented that the final report should have a much stronger connection with the Chesapeake Bay Protection Agreement (CBPA). There is the potential of significant expense associated with non-compliance with the CPBA. Watersheds not in compliance with CBPA will likely be assessed fines. Therefore, watershed management needs to be expressly linked to the CBPA agreement, and placed at the top of the Executive Summary.

Participants noted that the final report should also take note of resources such as the Community Watershed Assessment Handbook (http://www.chesapeakebay.net/pubs/watershed_assess/) published by the Chesapeake Bay Program, as well as the work of adjacent counties through such activities as the Potomac River Roundtable (http://www.potomacroundtable.org/), and DEQ's Water Supply Planning Program (http://www.deq.state.va.us/watersupplyplanning/homepage.html).

Future Committee Structure

The group next discussed the structure and role of the proposed stakeholder Steering Committee, which is envisioned to guide the next phase of watershed planning. A proposed structure diagram was handed out as a starting point for the discussion. The question was raised as to who should serve on this Steering Committee. A proposal was made that the Steering Committee should be comprised of groups that have signed onto the DOC; concerns were also expressed that this might unnecessarily limit membership in the Steering Committee. This point will be further discussed at the next SWMS meeting on June 14th.

The concern of future coordination with the WRTAC was raised and discussed by the group. It was explained that the WRTAC reports to the Board of Supervisors (BOS) through its Transportation and Land Use Committee (TLUC). The WRTAC is charged with water resource management, on an advisory capacity only to the BOS. They do not have a lot of resources for planning or watershed management. Their role was, in the words of one participant, "to review things, not do things." In addition, the WRTAC has not existed during specific time periods, according to Team members, which raises concerns that the Steering Committee could lose its conduit to the Board if the WRTAC is either discontinued or falls into disfavor.

Team members noted that the Steering Committee (SC) would be a new and separate group, and asked how it would collaborate or relate to the WRTAC, especially in terms of BOS or TLUC communications. One suggestion made was that since the WRTAC already has a formal relationship with the Board, and since it is assumed that WRTAC would have a representative on the Steering Committee, like it does on SWMS, then the SC's reporting and communication should be channeled through it. However, participants noted that a problem could arise if the SC and WRTAC could not agree on an issue. In cases of disagreement, should the SC report straight to the BOS? It was noted that this might be difficult because it is hard to get on the BOS agenda, and communication is usually channeled through committees such as TLUC and WRTAC.

A question was posed about whether the SC work and reporting could be under the umbrella of the LCSA. One participant noted that he expected the SC to go through WRTAC, but if it were the wish of the Board for the SC to go through LCSA it could take years for that relationship to become a reality. LCSA currently does not have watershed planning as part of its charter, and modifying this could take a long time.

Someone suggested that these details could be worked out in the next phase, by the Steering Committee itself . Someone else observed that the SC is a stakeholder group and not all activities are dependent on the County for implementation or action. The group noted that ultimately it is better to coordinate and cooperate; those people who are already doing watershed activities will likely continue to do so regardless of how the SC is set up. It was also pointed out that the County's staffing and financial resources are a significant part of any watershed planning and implementation process.

Another possible scenario was presented, wherein the SC would be comprised of all organizations that have committed themselves through the SWMS process to work on watershed planning. They would not need to have BOS approval to meet or work. This would be a kind of umbrella committee for all groups and committees committed to watershed planning.

A suggestion was made that the discussion could focus on the SC paths of communication with county government and organizations more than on reporting or organizational structure; also, more than one "structure chart" may be necessary to articulate the various functions and relationships of the Steering Committee. Three types of charts were proposed:

1. Decision Making
2. Organization
3. Communication

It was acknowledged that this is a complex job, and a small working group was tasked to work on the proposed charts later in the afternoon.

Commitments for the DOC

There was a discussion of the draft commitments, as some participants expressed difficulty in understanding what should or could be included in a "commitment" that would be incorporated at the end of the DOC. The facilitators explained that the "commitments" are simply an articulation of how an organization or agency intends to be involved in the watershed planning effort and what it can contribute – such as participation in the SC, continuing to conduct water monitoring, conducting citizen education, writing or leveraging grants, etc.

There was some concern raised that for organizations or agencies, especially large ones with their own mandates, getting approval for signing the DOC may be difficult to achieve. Individuals expressed that there are elements in the DOC that are not relevant to the groups they represent. The question of 'what does a signature' mean was raised.

To give flexibility to the DOC signing or approval process, several DOC signing options were proposed:

1. Sign the DOC to indicate support for its content, without offering a specific commitment of resources. Signing the DOC could occur at the June meeting or could be in the form of a pre-signed letter of endorsement brought by the organizational representative.
2. Make a specific commitment of resources, without actually signing the DOC,
3. Not signing the DOC or making a commitment, but simply supporting or participating in the SC.
4. Signing the Executive Summary as opposed to the DOC.

No consensus was reached on how SWMS members may indicate support for their consensus work.

IEN will work County staff to sort through these options, and will send out a draft signature page and a clarification for what signature options are available to the SWMS Team.

Work Plan Discussion

Christine Gyovai introduced the draft Work Plan to the group, commending the hard work of the Ad Hoc committee convened by Darrell Schwalm. The draft Work Plan turns the elements of the DOC into a specific action plan. One member asked if this draft Work Plan should be more realistic or more of a wish list, and people agreed that a realistic approach was more desirable. The question was raised if this draft Work Plan was even necessary at this stage of strategic planning, for the Steering Committee would ultimately need to define its own action plan. Perhaps the Team's time could be better spent by identifying 5-6 elements of the proposed work plan that should receive priority. There was general agreement that the draft Work Plan does not need further work at the present; instead a small group would meet in the afternoon to identify the priority 5-6 actions necessary to 'keep the momentum' going after the SWMS process concludes.

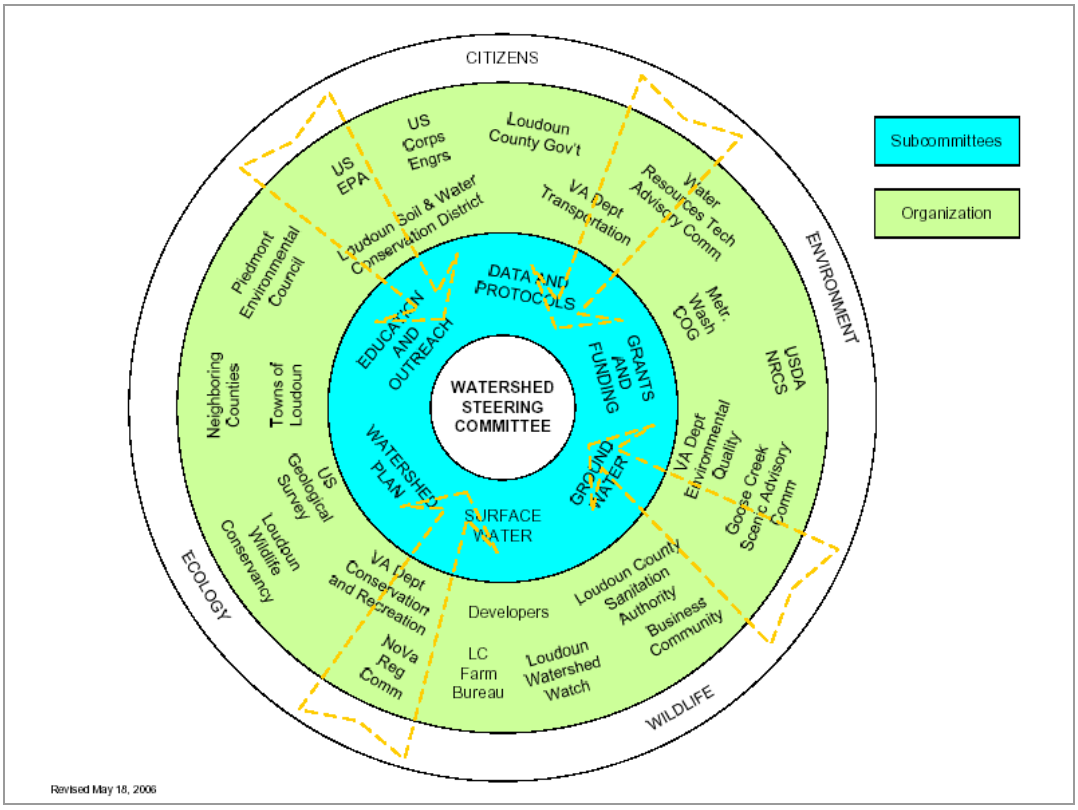
Working Group 1: Work Plan Priorities for 'Keeping the Momentum'

Bruce McGranahan reported on the conclusions of the small working group charged with identifying priorities and actions for the immediate next phase after the SWMS process—specifically action items to *keep the momentum* going. The group's refrain was an enthusiastic – "sell, sell, sell" – meaning there is a strong need to get the word out and generate support for the watershed planning effort. The following six priority actions were proposed:

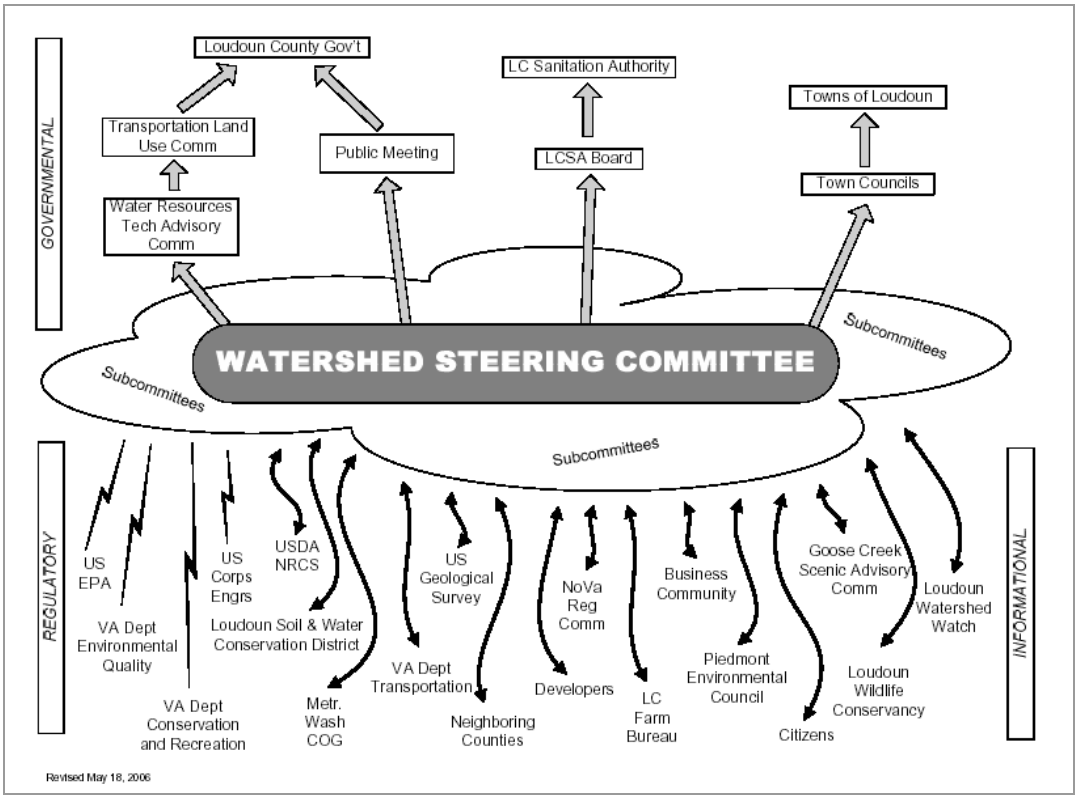
1. Establish the Steering Committee
    a. SWMS Team members are seen as a good starting point for composition of the Steering Committee (SC). School representation needs to be added.
    b. The SC should be broadly representative of groups that are in Loudoun County, with approximately 20-25 people.
2. Complete the Inventory of Watershed Activities
    a. This should follow-up and complete the work of the SWMS Team.
    b. This may be accomplished by an interim "Bridge Committee" that could work together over the summer before the SC forms in the fall.
3. Define "Who are we?"
    a. Find effective and understandable means to communicate (and translate) who the group is (the interim Bridge Committee or the SC – basically for the whole effort).
    b. Define how this group relates to other groups (process), and what does it mean to Loudoun?
4. Educate elected officials, including the individual BOS members, about the watershed planning effort and its importance ("selling" the effort).
5. Educate and "sell" to Towns and other groups
    a. Education should happen for elected officials first, and then citizens in the long term.
    b. Use existing educational materials as much as possible, including DCR and Cooperative Extension's educations printed materials.
6. Design the marketing approach and materials for the education effort.

Working Group 2: Committee Structure

A small group met to further develop the Steering Committee Structure ideas. David Ward reported on the conclusions of the small working group charged with drafting the structure charts (organization, decision-making, and communication) for the Steering Committee. The group presented two charts, one for the internal organizational structure for the Steering Committee, and one for communications. The group struggled through a number of the complexities raised in the wider group discussion, and went through a number of iterations of drawn charts to arrive at these diagrams. The following chart represents the Steering Committee's organization, as presented to the group.



The following diagram represents communications channels of the Steering Committee as presented to the group:



Next Steps / Preparations the Final June Meeting
The facilitation team reviewed a list of next steps and other actions necessary to prepare for the final June 14th meeting of the SWMS team. There was some discussion on the need to address the issue of consensus, and what to do about people who may not have attended all four meetings. It was agreed that anyone who attended at least one meeting could be eligible to sign or commit to the DOC. At the June meeting, the final DOC will be reviewed, including the list of participants who were involved in the consensus process. Participation is defined as attending at least one meeting.

Next steps identified:

1. The Cost Benefit section of the Final Report needs to be drafted. The subcommittee charged with doing this is comprised of Kelly Baty, Marc Aveni, Jim Christian, and Rob Swanson.
2. A team was designated to communicate with the BOS to build support for SWMS. This subcommittee is comprised of Bruce McGranahan, Chris Van Vlack, Gem Bingol, and James Mackie. Ideally one-on-one board members meetings will be part of this effort.
3. Work is needed for the "Decision-making chart." The subcommittee that is working on this is comprised of Alex Blackburn, Helen Casey, Mark Peterson, Glen Rubis, Todd Danielson, Gem Bingol, David Ward, Darrell Schwalm, and Kelly Baty. This group also needs to make recommendations on the name for Steering Committee – should it be called a Round Table, Forum, or Council? Also, what would be criteria for membership or participation?
4. Inventory and Analysis. Jason Espie will individually contact point-persons for each activity to obtain metrics or missing information. Feedback due by May 26, 2006.
5. Those that agreed to send new DOC language need to provide ASAP.
6. IEN will work with the County to identify how and what members will sign to express support for the DOC.

The final meeting of the SWMS Team will be held on June 14, from 9:00 am - 4:30 pm, at the Best Western Hotel in Leesburg. Tentative discussion items include the following:

- Work plan
- Structure and Name for Steering Committee
- Membership of SC
- Plan for convening SC
- Cost/Benefit for the watershed plan
- Signing the consensus document and reviewing any specific commitments being offered
- Celebration

Attachments
Final Report Components
DOC (The latest version, with changes from meeting)

List of Participants (May 4, 2006 Meeting)

WATER SUPPLY
Todd Danielson, Loudoun County Sanitation Authority

FEDERAL & STATE AGENCIES
James Christian, SWCD District Board
Peter R. Holden, Loudoun Soil & Water Conservation District
Patricia (Pat) McIlvaine, Virginia State Soil and Water Conservation Districts
Pawan Sarang, P.E., Virginia Department of Transportation
Bob Slusser, Virginia Department of Conservation and Recreation
Robert Swanson, VA Department of Environmental Quality
Chris Van Vlack, Virginia State Soil and Water Conservation Districts
Larry Wilkinson, U.S. Department of Agriculture, NRCS, FSC, USDA

LOUDOUN COUNTY
Wm. Kelly Baty, Loudoun County Building & Development
Alex Blackburn, Loudoun County Building & Development
Dennis Cumbie, Loudoun County Building & Development
Charlie Faust, Water Resources Technical Advisory Committee
Joe Gorney, Loudoun County Planning Department
Sally Kurtz, Loudoun County Board of Supervisors
James Mackie, Loudoun County Environmental Health, Environmental Engineering and Policy Development
Bruce McGranahan, Environmental Program Coordinator, Loudoun County Planning Department
Linda Neri, Deputy County Administrator, Loudoun County
Glen Rubis, Loudoun County Building & Development
Stephen Snow, Loudoun County Board of Supervisors
David Ward, Loudoun County Public Works
Randy Williford, Loudoun County Public Works

LOUDOUN PUBLIC & AGRICULTURAL GROUPS
Chris Hatch, Loudoun County Farm Bureau
Donna Rogers, Loudoun County Farm Bureau

CONSERVATION & ENVIRONMENTAL GROUPS
Gem Bingol, The Piedmont Environmental Council
Helen Casey, Goose Creek Scenic River Advisory Committee
Phil Daley, Loudoun Wildlife Conservancy
Cliff Fairweather, Audubon Naturalist Society
Ed Gorski, The Piedmont Environmental Council
Darrell Schwalm, Loudoun Watershed Watch
Nancy West, Goose Creek Association

DEVELOPMENT COMMUNITY
Mark Headly, Wetland Studies and Solutions, Inc. (WSSI)
Mark Peterson, Luck Stone Corporation
David Snellings, Greenvest L.C.

REGIONAL GOVERNMENT
Michael T. Hackett, Metropolitan Washington Airports Authority, Department of Planning

FACILITATION
Tanya Denckla Cobb, Institute for Environmental Negotiation, UVA
Jason Espie, Institute for Environmental Negotiation, UVA
Christine Muehlman Gyovai, Institute for Environmental Negotiation, UVA

MEDIA
Katie Murphy, Loudoun Observer

The Loudoun Strategy for Watershed Management Solutions (SWMS)
Draft Final Report Outline
May 3, 2006

1. **Executive Summary and Summary of Strategy:** The Executive Summary will present a brief overview of the DOC recommendations, possibly including action items for consideration by the Board of Supervisors and Town Councils.
    a. **Cost-Benefit Analysis:** The Executive Summary may include a cost/benefit benefit analysis of conventional approaches to resource protection vs. watershed-based protection, restoration, treatment, and preservation.
    b. Note: The cost/benefit analysis must be completed by people with expertise in this area, ideally a subcommittee of the SWMS Team.

2. **Declaration of Cooperation (DOC):** The DOC will represent the detailed consensus recommendations of the SWMS Team for Loudoun's watershed planning effort. The DOC is intended as the main document that will guide Loudoun's watershed planning.

    a. **Quality Assurance/ Quality Control:** The DOC will include a set of standards and protocols for data collection, analysis, and reporting. This could be accomplished through a consensus recommendation of the SWMS Team that the Steering Committee or its subcommittees (e.g. data management or technical subcommittees) may adopt protocols as the need arises.

3. **Watershed Inventory**: This is an inventory of all current and potentially future anticipated watershed-related activities in Loudoun County by local organizations, state and federal agencies, and county and regional government. Costs associated with these current and future anticipate work will be included where possible, based on input provided by the SWMS Team members.

    This inventory will also include an **analysis of watershed activities**. The analysis will begin to quantify pollution reduction achievements of these activities by using a variety of metrics, such as linear feet of riparian buffer planted, streams restored, floodplain setbacks achieved, or acres of wetlands preserved or restored, based on input provided by the SWMS Team members.

4. **Watershed Planning Work Plan:** This work plan will specify tasks derived from the Declaration of Cooperation, along with a timeline, responsible parties, partners, and resources needed. As part of this work plan, an organizational structure will be included to suggest how the different groups may relate and work with each other.

5. **Appendices**: The appendices will include all other documentation related to the SWMS Team effort.
    a. Meeting summaries
    b. List of people contacted by IEN to participate in the SWMS effort, and participants in each of the SWMS Team meetings.
    c. Summary of IEN interviews of stakeholders.

The Loudoun County Strategic Watershed Management Solutions (SWMS)

February-June, 2006

Declaration of Cooperation Executive Summary

********DRAFT 5/26/06*********

The Declaration of Cooperation (DOC) provides a consensus strategy for guiding Loudoun County's watershed planning process. The DOC was created by the 55-member Loudoun Strategic Watershed Management Solutions (SWMS) Team, consisting of representatives of 41 different development, agriculture, conservation, county, state, federal and citizen interests. Team members worked over the course of four intensive meetings (February to June 2006) to develop this consensus guidance, and request the Loudoun County Board of Supervisors and Towns enact resolutions of support for the DOC.

In recognition of the need for continued collaboration through the watershed planning process, the DOC describes the County strategy for watershed planning and also identifies specific Team member commitments for supporting the County strategy. *(For further background on SWMS, see the Summary of SWMS. For specific commitments of Team members, see Appendix 3.)*

Need: Loudoun County currently manages its water resources through a variety of diverse programs, but has no county-wide watershed plan that connects these programs or establishes priorities among the programs. A watershed plan will bring together the County's needs, priorities, and implementation plans into a specific project that will protect and restore its water resources. It will provide an integrated picture of federal and state obligations for removing pollutants from Loudoun's waters, combined with priorities for protecting drinking water and preventing pollution of currently clean waters. *(For more specifics on what a watershed plan will cover, see the Summary of SWMS, page 2.)*

Principles, vision, values, goals: The SWMS Team identified guiding principles for the planning process and crafted a vision, values and goals for the watershed plan, which may be found in the DOC, Section II.B.

Scope and Overall Process: The SWMS Team recommends a *two-phased approach* to develop watershed plans. A phased approach will enable the County to immediately begin watershed planning using currently available data to minimize cost. It will also allow the County to enhance the quality and sophistication of its plans over time as additional resources become available. The watershed planning process will result in watershed plans for nine major watersheds within the County and support the watershed activities of neighboring Counties where the natural borders of some of the nine watersheds end. When more resources become available to the County, more data collection and analysis followed by the development of more sophisticated and detailed watershed plans will ensue. *(For more information on the two-phased approach, see the DOC, Section III.)*

Collaborative Governance Approach: To provide policy and technical oversight for the watershed management process, a county-wide Stakeholder Steering Committee will be formed to guide implementation of this Declaration of Cooperation and develop watershed plans, and resolve other issues related to watershed management. The SWMS Steering Committee may designate subcommittees to specifically resolve issues such as data management and storage, funding, and other technical matters,

which in turn will work with other subcommittees designated from BOS Advisory Committees (e.g., LUTC, WRTAC, etc.) Please see the committee organization chart in Appendix 2.

BOS Action Needed: The SWMS Team requests that the Board of Supervisors and Town Councils pass a Resolution of Support for this strategy, which has been developed through hard work and dedication of a diverse and broadly-representative group of stakeholders.

The following specific actions will result from this Resolution of Support:

1) **Designate a Watershed Coordinator or Manager:** The Watershed Coordinator or Manager will be responsible for coordinating the County's watershed planning, and will report directly to the County Administrator's Office. The Manager's or Coordinator's responsibilities will include being the contact and liaison between the stakeholder Steering Committee, the staff, and County Administrator's Office.

2) **Establish a County-wide Stakeholder Steering Committee:** The SWMS Team will empower the Steering Committee to begin to guide the watershed planning activities and to implement the Declaration of Cooperation. *(For more information on the Stakeholder Steering Committee, see the DOC, Section 3.C.)* The Steering Committee will create several key subcommittees that will guide key watershed planning activities, which may include: 1) funding; 2) data management; 3) education and outreach; and 4) technical coordination.

Participating Members of the SWMS Team

FEDERAL & STATE AGENCIES
Virginia Department of Conservation and Recreation (DCR): Bob Slusser, Mark Aveni
Virginia Department of Environmental Quality: Robert Swanson, Bryant Thomas
Virginia Department of Forestry: Kelley Wagner
Virginia Department of Transportation: Pawan Sarang
Soil & Water Conservation District Board: Jim Christian, Peter Holden, Pat McIlvaine, Chris Van Vlack
U.S. Department of Agriculture, NRCS, FSC, USDA: Larry Wilkinson
U.S. Geological Survey: Mark R. Bennett, Nick Ratcliff (retired)
U.S. Army Corps of Engineers, Stacey Sloan Blersch
U.S. Environmental Protection Agency: Debra Gutenson, Office of Ground Water and Drinking Water; Otto Gutenson, Wetland and Waters Program

LOCAL GOVERNMENT
Fairfax County: Matt Meyers
Lovettsville: Samuel Finz
Loudoun County Administration: Linda Neri
Loudoun County Board of Supervisors: Sally Kurtz, Stephen Snow
Loudoun County Building & Development: Wm. Kelly Baty, Glen Rubis, Alex Blackburn, Dennis Cumbie, Laura Edmonds, Ed Erwin, Kevin Haile, Steve Kayser, William Marsh, Todd Taylor, John Zuiker
Loudoun County Economic Development: Warren Howell
Loudoun County Environmental Health, Environmental Engineering and Policy Development: James Mackie
Loudoun County Office of Mapping and Geographic Information, Trent Small
Loudoun County Parks and Recreation: Mark Novak
Loudoun County Planning Department: Bruce McGranahan Joe Gorney,
Loudoun County Public Works (General Services, Stormwater): David Ward, Randy Williford
Loudoun County Public Schools: Evan E. Mohler, Randy Vlad
Water Resources Technical Advisory Committee (WRTAC): Charlie Faust

WATER SUPPLY
Loudoun County Sanitation Authority (LCSA): Todd Danielson

PUBLIC & AGRICULTURAL GROUPS
Loudoun County Farm Bureau: Chris Hatch, Donna Rogers
Loudoun Co. Cooperative Extension: C. Corey Childs
Farmer: Chip Planck

CONSERVATION & ENVIRONMENTAL GROUPS
Audubon Naturalist Society: Cliff Fairweather, Stella Koch
Catoctin Scenic River Advisory Committee: Ann Larson
Goose Creek Association: Nancy West
Goose Creek Scenic River Advisory Committee: Helen Casey
Loudoun Watershed Watch: Darrell Schwalm, Fred Fox
Loudoun Wildlife Conservancy: Phil Daley
The Piedmont Environmental Council (PEC): Gem Bingol, Ed Gorski

DEVELOPMENT COMMUNITY
Greenvest L.C., David Snellings, George McGregor
Heavy Construction Contractors Association: Jim Stepahin
Luck Stone Corporation, Mark Peterson
Toll Brothers, Bill Hatzer
Wetland Studies and Solutions, Inc. (WSSI), Mark Headly

REGIONAL GOVERNMENT
Metropolitan Washington Airports Authority: Michael T. Hackett, Charles Baummer
Metropolitan Washington Council of Governments: John Galli
Northern Virginia Regional Commission: Katherine K. Mull

I. NEED FOR A COMPREHENSIVE WATERSHED PLAN

Loudoun County is required to meet several state and regional water resource program goals and statutory requirements. These include the Virginia Pollution Discharge Elimination System (VPDES) requirements, the Municipal Separate Storm Sewer System (MS4) requirements, the Total Maximum Daily Load (TMDL) numeric caps and daily limits, Nutrient Load Caps for Wastewater Plants including offset requirements for new and expanded facilities (growth), Nutrient Removal Technology for Wastewater Plant requirements, Water Supply Planning and Drought Management plan requirements to be applied locally or regionally, Virginia Tributary Strategies under the Chesapeake Bay Agreement, and the Virginia Scenic River requirements, among others. The state recommends that local watershed management plans be used as a planning tool by local governments to integrate the requirements of and help meet these requirements. Local watershed plans can also provide a more comprehensive local perspective to the state and regional efforts, as well as enhance these efforts.

The state also advises that it is "critical that both comprehensive plans and zoning proposals are reviewed in the watershed context" (excerpted from "Local Watershed Management Planning in Virginia – A Community Water Quality Approach" - DCR). Including watershed management planning in the comprehensive plan improves decision-making, helps establish policies that will drive needed zoning amendments, and will better connect and integrate water resource goals with other plan goals. It also helps to avoid costly mistakes and secondary impacts on land use decisions on water and habitat quality.

Loudoun County already has a number of important programs and activities related to watershed management, however, they can be disconnected efforts. Currently there is no county-wide watershed plan, or no watershed-based plan for managing the County's water resources. The County currently manages its water resources through a variety of programs, but they can lack consistent coordination because they are administered through different Departments and may be managed on a case-by-case or site-specific basis. Much like the County's Capital Improvement Plan that brings together in one place all of the county needs and priorities for capital improvements, a watershed plan will bring together in one place, for the first time, all of the County's needs and priorities for managing its water resources.

Thus, a watershed management plan will provide the Board of Supervisors with an integrated picture of Loudoun's federal and state obligations for removing pollutants from Loudoun's waters, combined with its priorities for protecting drinking water and preventing pollution of currently clean waters. Bringing all of this information together is essential, particularly as federal and state governments are increasing their mandates relating to water quality and water supply planning. The watershed plan will achieve several goals.

1. The plan will provide guidance on a county-wide basis for assessing the current condition of Loudoun's waters; this assessment will identify waters in need of remediation or restoration and those in need of protection from becoming degraded.
2. The plan will prioritize the areas needing attention first and create a specific plan of action, based on a set of criteria to be established and a cost-benefit analysis. Actions may include:
    a. specific on-the-ground stream restoration, stormwater management, or other infrastructure projects;
    b. policy recommendations to achieve improved protection of Loudoun's waters;

c. education, partnership, and implementation projects that will improve citizen involvement in protecting Loudoun's waters.

3. The plan will also identify sources of funding and create a strategy for funding watershed plan implementation.
4. Implementation of the plan will help create healthy water resources which are economically valuable. Water resource protection activities in agricultural, residential, and urban areas will often provide economic benefits to the landowner, along with the expected environmental benefits. Restoring stream buffers and protecting wetlands, floodplains, and ground water recharge areas will reduce erosion and flooding, as well as maintain the quality and quantity of surface water and groundwater for drinking water supplies.

Further information about the content and nature of a watershed plan may be found in Appendix _.

II. BACKGROUND OF SWMS

The Loudoun Strategic Watershed Management Solutions (SWMS) is a collaborative initiative to coordinate existing watershed efforts and define a shared vision for managing Loudoun County's watersheds. A stakeholder group was convened by Loudoun County's Department of Building and Development and facilitated by the University of Virginia's Institute for Environmental Negotiation (IEN). Funding for the project is provided by the National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, and Loudoun County.

The first step in the SWMS initiative was the formation of a stakeholder group called the "SWMS Team." During January and February 2006, IEN conducted 17 interviews with stakeholders representing different perspectives and interests about the development of a strategy for watershed planning in Loudoun County. These interviews were conducted in preparation for the first SWMS Team meeting to help shape the agenda, identify the kind of information and speakers needed at the first meeting, inventory activities and studies relevant to Loudoun's Watershed Planning effort, and identify issues and concerns that would need to be discussed. With this information, IEN developed a summary of its findings as well as an inventory of watershed activities, studies, and sources of data. Drawing on recommendations from county staff and a number of stakeholders interviewed during the convening process, over 125 people who represent the interests of federal, state, regional, local government (County and Towns), water supply, environmental and conservation groups, farming, business, development, and homeowner associations were invited to participate. Of those invited, approximately 65 (Number to be filled in by IEN at the end of the process) people participated in the four SWMS meetings, February 22-23, March 23-24, May 4, and June 14, 2006, in which decisions were made by consensus.

Through the SWMS meetings and after much deliberation, discussion, and hard work, the Team developed a number of key recommendations regarding the development of a Watershed Plan for Loudoun County. The key areas of agreement developed by the SWMS Team, with details about each area of agreement, are contained in the body of the Declaration of Cooperation (DOC).

The SWMS Team understands that the Watershed Planning process will need to use an adaptive management approach in which changes in the planning process are made as experience is gained and lessons learned. The agreements reached represent recommendations by the SWMS Team, and it is recognized they may need to be modified to reflect revised timelines or available resources. The Team recommends the establishment of a Steering Committee that will support the adaptive management approach by providing a mechanism to collaboratively make changes to the recommendations contained in this Declaration of Cooperation.

SWMS DECLARATION OF COOPERATION

III. DOC BACKGROUND

This Declaration of Cooperation (DOC) was created in Spring 2006 to serve as a compendium of the recommendations developed by the Loudoun Strategic Watershed Management Solutions (SWMS) Team over four meetings held in February to June 2006. The DOC represents significant thought and effort on the part of key stakeholders, and it draws on the lessons learned from other Virginia counties that have already undertaken watershed planning. To reconcile conflicting viewpoints regarding the watershed planning process, Loudoun County staff envisioned the need to bring all key stakeholders together at the outset to create a shared consensus strategy and process for watershed planning that the County and stakeholders, together, could both support. This DOC, as a result, provides consensus parameters and guidance for the Watershed Planning process. In addition to consensus support for the collaborative approach outlined, as indicated by the signature page, some SWMS Team members have provided additional specific organizational commitments to the Watershed Planning process. (*Member signatures and commitments may be found in Appendix 3*.)

KEY AREAS OF AGREEMENT

IV. GUIDING PRINCIPLES, VISION, VALUES, AND GOALS

The following guiding principles, vision, values, and goals are recommended for a watershed plan for Loudoun County.

A. Principles – The following are principles recommended to guide the Watershed Management Planning process:

1. Create a realistic, achievable, implementable, balanced plan based on scientific data and models that are accepted by professional scientists in the field.
2. Create a flexible, dynamic, and simple plan.
3. Address resources for implementation in the Watershed Planning process (monetary, in-kind and staff).
4. Consider economic development, jobs, housing (current and future), agriculture, and conservation land needs in the creation of the plan.
5. Provide a plan based on consensus among the diverse views.

6. Provide a collaborative approach that allows stakeholders to work together to provide support and not duplicate individual efforts or projects.

B. Vision -- The following vision is recommended for Loudoun County's watershed plan:

Loudoun County is a place where natural and cultural resources offer beauty and function. Residents and visitors enjoy clean drinking water, recreate in swimmable and fishable waters, and have access to diverse natural habitats. Loudoun's residents remain informed, energized, and involved in maintaining and protecting healthy watersheds.

C. Values -- The following values are recommended to drive Loudoun County's Watershed Planning effort and to meet the needs of future generations:

1. ***Affordable and clean drinking water is always available for all Loudoun citizens.***
2. Economic development activities are sensitive to watershed functions and health.
3. ***Nature and natural systems that are essential for stream health exist in all Loudoun watersheds.***
4. ***Stewardship is recognized as a community responsibility and encouraged.***
5. ***Recreational use of accessible water resources is available for all Loudoun citizens.***
6. ***Healthy stream habitats and aquatic ecosystems are protected in all Loudoun streams.***
7. Watershed planning and management is sensitive to the needs of agricultural production, including adequate water supplies, and the continued viability of the County's agricultural heritage as a means of food security and economic growth.
8. ***All Loudoun citizens remain engaged, informed, and active in watershed planning, expressing the holistic concept of community responsibility.***

D. Goals -- The following broad goals are recommended for Loudoun County's Watershed Planning effort:

1. Protect public health and the environment.
2. Manage groundwater and surface water supply for current and future demands through private and public means.
3. Manage stormwater runoff in accordance with best management practices to protect stream channel processes and to preserve and restore water quality, stream health, and groundwater recharge.
4. Protect, provide, and restore diverse habitats and riparian buffers to provide healthy streams and public recreation opportunities.
5. Preserve the economic value of healthy watersheds by providing the natural functions of watersheds including wetlands and floodplains.
6. Engage citizens in watershed planning efforts, raise their awareness of Loudoun's watersheds, and utilize citizen input in all watershed matters.

7. Effect cooperation and coordination between government and non-government watershed management efforts, data collection, and resources within the watersheds.

V. Scope and Overall Process for Loudoun Watershed Planning

A. Two-Phased Approach -- The SWMS Team recommends a two-phased approach to develop watershed plans. This phased approach will enable the County to immediately begin watershed planning using currently available data at a minimum cost. It will also allow the County to enhance the quality and sophistication of its plans over time as grant and other funding becomes available.

B. Phase I -- Watershed management planning can proceed immediately using already acquired or existing data in a cost-effective manner. In this phase, three different types of plans are recommended in recognition of the different scope and scale of legal requirements and needs for watershed planning. All three should be developed in parallel, at the same time, using currently existing data, beginning as soon as practicable.

1. **Tier I: Regional Plan**: Loudoun County watersheds extend into adjoining counties, and are part of the larger Chesapeake Bay Watershed. It is recommended that a Regional Watershed Plan defined by the geographic boundaries of the watersheds be developed in cooperation with neighboring jurisdictions and regional authorities (e.g. Fairfax, Prince William, and Fauquier).

2. *Tier II: Major Watershed Plans:* ***Individual Watershed Management Plans that are defined by both the political boundaries of the County and watershed boundaries are recommended to be developed for the nine major watersheds in Loudoun County. These plans will involve working with stakeholders within those watersheds, and providing communication and coordination regarding those plans at the County-wide level. Individual watershed management plans, using existing data, should be developed for: (1) Sugarland Run and Broad Run, (2) Bull Run, (3) Beaverdam Creek and Lower Goose Creek (4) Upper Goose Creek, (5) Limestone Branch and Clarks Run, (6) Catoctin Creek, (7) Dutchman's Creek and Quarter Branch, (8) Piney Run, (9) Cub Run.***

3. **Tier III: Subwatershed Implementation Plans**: Preliminary Subwatershed Implementation Plans should be developed as supplements to each of the major watershed plans. The subwatershed plans should be defined by both subwatershed boundaries and characterization of the subwatershed, selected from one of four possible characterizations defined by the Center for Watershed Protection. Each subwatershed plan will provide implementation strategies to protect and restore the water quality and stream health in specific portions of the watershed. The order in which these supplemental plans are developed should be based on a prioritization system that selects the "most vulnerable" watersheds based on projected future impacts, with preference given to headwater subwatersheds, drinking water sources, and vulnerability potential.

4. **Modeling** – In Phase I the County will begin its watershed planning with least-cost predictive tools that do not require data beyond what is already available, that is simple, and can be used in-house by Loudoun County staff. For predicting impacts of different management options on water quality and quantity, the County will consider basic spreadsheet models. For ground water quality and quantity, the

models can offer predictive guidance for nonpoint source pollution and base flow. Questions regarding ground water availability are more difficult to quantify with ground water models and require a good conceptual understanding of the ground water flow system of the area being studied. In Phase I, the County will focus on developing a conceptual understanding of the groundwater flow system. (*For further guidance on modeling, see Appendix 1).*

C. Phase II – More sophisticated watershed management plans can be developed when County or other resources are available to collect and analyze additional data, based on established priorities. The data collection could focus on: (1) filling identified data gaps; (2) developing sophisticated predictive models to assess degradation impacts under varying loading and growth conditions (see Section IV below); (3) developing detailed subwatershed implementation plans based on stream surveys; and (4) assessing progress in achieving planning goals based on water quality and stream health data collected under probability and trend monitoring approaches.

1. **Detailed Field Surveys** -- Additional field surveys should be conducted in each subwatershed to provide updated and more detailed data. These detailed field surveys, which could use the Center for Watershed Protection's Rapid Stream Assessment Technique (RSAT), should be used to assess the pathways of runoff to streams, hydrological impacts of increased runoff, impacts on aquatic life, and impacts on habitat impacts.
2. **Updated Implementation Plans** -- These field survey results can be used to revise the preliminary subwatershed implementation plans into more detailed, long-term implementation plans.
3. **Modeling** -- As the County progresses in its Watershed Management Planning effort, it may need more sophisticated predictive capability. When more data are gathered and become available, the County should consider more complex modeling methodologies to predict the impact of proposed management strategies on water quality, quantity, and groundwater. More complex modeling may require additional funding and staffing capacity to accomplish. (*For further guidance on modeling, see Appendix 1.)*

C. Collaborative Governance Approach – A county-wide Stakeholder Steering Committee will be established to provide policy and technical recommendations to the Board of Supervisors. The Stakeholder Steering Committee will guide implementation of this Declaration of Cooperation and ensure that an "adaptive management" approach will be used to make changes to the watershed planning process as experience is gained and lessons learned. Technical subcommittees and stakeholder committee should be established to provide input and guidance to the different types of watershed plans as needed. The SWMS Team also recommends establishing subwatershed committees, if needed, with liaisons from the subwatershed committees serving on the county-wide Stakeholder Steering Committee. For the Stakeholder Steering Committee composition, organizational structure, and communication structure, see Appendix 2.

VI. Modeling

A. Decision-Making Tool -- Computer modeling can be a helpful decision-making tool for the watershed planning process. It can be used to forecast the impact of different

management strategies, and therefore help in the selection of preferred management practices. The principal use envisioned for modeling in the Loudoun Watershed Planning process is to provide better information for decisions regarding water quality and water quantity (water supply planning) for both surface and ground water. (*For further guidance on modeling, see Appendix I.)*

1. **Surface Water Modeling** -- For surface water quality and quantity, the models can offer predictive guidance for aquatic, drinking, and recreational values of streams, specifically addressing at least sediment, nutrients, and flow variation ("flashiness").
2. **Ground Water Modeling** -- For ground water quality and quantity, the models can offer predictive guidance for nonpoint source pollution and base flow, and will help develop a conceptual understanding of the groundwater system.
3. **Modeling Choices** -- The Team recognizes that there are a wide range of models available that can vary greatly in cost, complexity, ease of application, and ability to use in-house. In light of the above, the Team recommends that the County adopt a phased approach, as described above. In addition, the Team recommends that the modeling information be shared with the public in an accessible and understandable format, perhaps via the Internet.

VII. Data Management and Protocols

A. Current Data Availability -- Data are a major component of the watershed plan, and there is a need for more attention and resources to be directed to data management and acquisition. The SWMS Team agrees that data and studies currently available are sufficient to provide the initial prioritization and snapshot assessment envisioned in Phase I of the proposed Scope. However, the SWMS Team recommends that the integrity of existing data be examined carefully before using it in any assessment as not all existing data are relevant to the assessment's purpose, and some are old or perhaps faulty.

B. Central Database and Data Coordinator/ Office -- A common database needs to be created to store water quality and quantity data from the many data collection entities working in the County. It is important that there be one data "coordinator" or management focal point that assembles data and establishes standard data collection and management protocols. The Team also recommends that the Steering Committee coordinate with the data coordinator or manager about the data needs identified by the Water Resources Technical Advisory Committee (WRTAC).

C. Monitoring -- A combination of monitoring approaches is needed. One approach, suggested for use during Phase I of the Scope, is to use probabilistic-based (statistical) monitoring, applied Countywide to provide baseline, and snapshot data on watershed conditions for tracking progress. Another important approach, suggested for Phase II of the Scope, is to establish an on-going system of permanent monitoring stations to monitor progress over time. Lastly, the SWMS Team recommends analyzing and reporting monitoring data on a periodic basis to ensure relevant data are being collected.

D. Stream Survey Data -- Stream surveys will eventually be needed to develop data needed for detailed implementation plans to protect or restore priority stream segments identified in subwatershed plans.

E. Data Collection Needs -- It is important that a number of data and stream quality studies be incorporated into the assessment and watershed characterization effort. There is a need to decide upon a means to quickly gather and assess these existing data for use in the county-wide assessment based on costs and the needs listed below. All new data collection should follow data collection protocols used by existing studies, or State-endorsed monitoring guidelines.

1. The County should consider making a commitment to inventory, map and monitor all water resources within the County's watersheds.
2. There is a need to establish a network of on-going monitoring stations to supplement the County-wide assessment and subwatershed characterization and to assist with the evaluation and updating of the Watershed Plans over the years.
3. A flow gauging network should be established to help monitor in-stream flow because maintaining ecologically healthy streams is a concern for the future of Loudoun's waterways.
4. GIS data needs to be incorporated into the Watershed Management Planning effort. Surface and ground water quality and quantity data, wetlands data, and other data as appropriate, needs to be incorporated into the County GIS system and the County base maps.

E. Protocols – The Steering Committee or its subcommittees may adopt standards and protocols for data collection, analysis, and reporting as the need arises.

VIII. Criteria for Prioritizing Problems and the Development of Subwatershed Plans

A. Need for Criteria-- The SWMS Team agreed that it is important to establish county-wide prioritization criteria to guide the Watershed Planning effort. Specifically, prioritization criteria should help identify which subwatershed Plans are developed first and where implementation should first be initiated. It is understood that any plan should be implemented incrementally so that identified priority areas can be addressed first.

B. Criteria Guidelines -- The Team identified the following list of criteria for priority determination. They are not ordered and not given weight.

- ***Rectify pre-existing and ineffective stormwater management controls.***
- ***Protect drinking source water.***
- ***Protect drinking water supply recharge areas.***
- ***Fulfill state and federal regulation requirements.***
- ***Protect waters in development-pressure areas, or areas on the cusp of change for future build-out.***
- ***Protect sensitive areas, such as headwaters, groundwater recharge areas, and wetlands.***
- ***Protect human health, particularly situation arising from possible septic or groundwater contamination.***

- ***Take into account the different characterizations amongst sub-watersheds such as size, urban, rural, East, West, soil type, farming, drinking water supply shed, etc.***
- ***Protect undeveloped or minimally developed subwatersheds.***
- ***Protect stream and road crossings.***
- ***Implement projects that are the most efficient and offer the greatest potential for efficient reduction of nutrients.***

IX. Funding

A. Funding Strategy -- Funding is a critical part of the Watershed Planning process, and the Team's recommendation for a funding strategy for the Watershed Planning process is below. In addition, the Team developed a list of potential sources of funding and principles to consider when seeking funding, and other related information. This information may be found in the March 2006 SWMS meeting summary.

B. Dedicated Funding -- The Team emphasizes the need for a dedicated source of funding for watershed planning from within the County. There are many potential benefits from watershed planning, such as being aware, proactive and prepared for new stormwater and nutrient cap regulations that are forthcoming. Creating a dedicated source of funding is important to ensure a successful Watershed Management Planning effort to help meet new regulatory compliance requirements. The Fairfax County model of property tax allocation may provide a good model of watershed planning funding.[MSOffice4]

C. Grant Funding -- Consider identifying sources of grant funding and corporate sponsorship for both a short-term and long-term source of funding for watershed planning, but especially in the short-term while a long-term funding strategy is being created. The SWMS Team recognizes that significant staff time is required to administer grants.

D. Targeted Funding-- Consider developing sources of funding for critical areas identified in the watershed plan. In addition, consider phases in watershed planning when looking for and dedicating sources of funding, as fewer financial resources may be needed for Phase I than Phase II.

E. Existing Funding-- Evaluate, prioritize, and possibly reallocate existing funding resources to determine if those resources could be applied to watershed planning.

F. Bay Act Funding-- Consider the possibility of Loudoun County adopting the Chesapeake Bay Preservation Act (CBPA), which may be a potential source of funding. However, there could be regulatory implications that would require careful consideration.

G. In-kind-- Consider significant financial contributions from in-kind sources such as citizen groups and the development community.

X. Stakeholder/ Citizen Involvement In the Watershed Planning Effort

A. Valuing Outcomes -- The SWMS Team agreed that the success of watershed management planning in Loudoun County ultimately depends on people valuing the outcomes and contributing to the watershed plan implementation activities. The planning

process should therefore involve people in the development of the Watershed Management Plans to enhance the plan's value to citizens.

B. Engaging Citizens -- Overall, the Team agreed that it is essential for the planning process to create ways that make it easy for Loudoun citizens to be informed, engaged, and involved. Ideas might include having planning leaders attend meetings of different citizens' groups to reach citizens who might be difficult to reach otherwise, creating a website, conducting workshops, creating other forums to engage citizens, and providing educational resources. It is important to "go beyond the choir" to engage citizens who might not otherwise be involved in the Watershed Management Planning process and Plan implementation. Outreach strategies also need to ensure that actual implementation strategies are accessible to people of all socio-economic levels.

C. Methods to Involve Stakeholders -- To ensure stakeholder involvement throughout planning and implementation, the Team recommends that the County adopt the following approaches:

1. Create an inventory of County organizations that are stakeholders in the watershed plan, i.e., organizations whose work or mission relates to the goals of the watershed plan, including conservation and environmental interests, historic preservation, development, business, and agriculture. The SWMS participant list may be used as an initial document for this inventory.

2. Convene a county-wide Stakeholder Steering Committee with representation of diverse interests to help guide the county-wide Watershed Management Planning process as previously outlined in Section III.D. This committee should include liaisons from watershed groups as well as resource people and Loudoun County staff.

3. Seek guidance from the county-wide Stakeholder Steering Committee and remain flexible in determining, for each individual watershed planning effort, the form of citizen involvement that is most appropriate for that watershed (e.g., stakeholder committees, task forces, *ad hoc* groups, focus groups, workshops, forums, presentations to homeowner associations (HOAs), etc.).

4. Consider using existing stakeholder groups (e.g., Loudoun Watershed Watch, Northern Virginia Building Industry Association, Soil and Water Conservation District, etc.) as forums to enlist citizen engagement in the Watershed Management Planning effort.

5. Involve schools and students, and use the schools as a forum to involve citizen in the planning process.

6. Recognize that parks and streamside trails are valued community resources that can be used to engage citizens in watershed management.

7. Consider using citizen volunteers to conduct some of the public education and outreach initiatives during the planning process to relieve the burden on County staff and to engage citizens in working with their neighbors.

XI. Education

A. Informed Citizenry -- The Watershed Planning process should include a strong education component to create a more informed citizenry and to raise the awareness of citizens regarding watershed management needs. Further, the educational component should not be designed only for the Plan but also for its implementation.

B. Strategies -- The SWMS Team provides the following recommendations and guidelines for the County's outreach and education efforts.

1. Use existing education/outreach programs to avoid 'recreating the wheel'.
2. It is important that education and outreach efforts stay independent of the political arena.
3. It is important during the planning process and as part of the Plan itself to provide new septic owners with concrete skills and knowledge about monitoring and maintaining septic systems.
4. Use stream valley parks as a venue for education and outreach.
5. Use education and outreach efforts to raise awareness of existing regulations and the need for compliance.
6. It is important to involving the schools and students in the Watershed Management Planning process.

XII. Policy and Regulations

A. Guidelines Regarding Policies and Regulations -- The SWMS Team agreed on the following guidelines for addressing policies and regulations in the Plan.

1. Measures to protect watershed health will be integrated into the County's planning and regulatory documents, including the Revised General Plan, Countywide Transportation Plan, Zoning Ordinance, and the Facilities Standards Manual. County planning and regulatory documents should further the health and viability of County watersheds with particular attention to adequate water supplies, good water quality, healthy riparian corridors, erosion and sediment control, and healthy stream flows.
2. The Stormwater permitting program is still under development, and other programs will need to be used in conjunction with the Stormwater program for addressing watershed problems.
3. Watershed planning strategies should be mindful of Virginia's Dillon Rule legal framework. Legal or other expert opinions should be obtained when possible to resolve or clarify differing interpretations, such as inconsistent interpretations of court rulings. For instance, it would be helpful to obtain clarification about alternative septic systems, as there are different approaches being taken in Clarke and Fauquier Counties.
4. The Plan should incorporate and address the TMDL regulations and guidelines of the Virginia Department of Environmental Quality and Department of Conservation and Recreation.

B. Guidelines for Handling Issues -- The SWMS Team agreed on the following guidelines for how to handle issues that arise during the Watershed Management Planning process that

impact policies and regulations. Some policy recommendations may apply to only one of the County's watersheds, while others may apply to the entire County.

1. Those policy recommendations that are applicable to the entire County should be lifted out of the individual watershed planning efforts, and placed on a separate and faster track for consideration by the Board of Supervisors (BOS), so that the policy recommendations are not on hold while the remainder of that watershed plan is being finished.
2. Recommendations for policy changes should be fed into the General Plan as proposed amendments and, where applicable, as amendments to the Zoning Ordinance and Facilities Standards Manual (FSM).

XIII. Coordination of County Authorities

A. Coordination Strategies -- Creating easy and efficient mechanisms for internal County coordination during the planning process and Plan implementation will be essential for success. Watershed planning is complex, involving multiple sources of data, multiple skill sets, and multiple County departments. To accomplish this goal, the SWMS Team recommends the following strategies.

1. **Designate Watershed Manager/Coordinator--** The BOS should designate where leadership for watershed management coordination will reside, a critical factor for effective coordination.
   - **a.** In the short-term, for the purposes of the Watershed Management Planning effort, the SWMS Team recommends that the BOS designate either an existing Department or the Environmental Coordinator as the lead for the Watershed Planning effort.
   - **b.** For the long-term, if needed to fulfill the requirements of the Chesapeake Bay Agreement, the SWMS Team urges the BOS to consider the creation of an Environmental Services Department in its long-term planning for County staff.

XIV. Involvement of County Decision-Makers

A. BOS Representation -- The SWMS Team recommends that the BOS and incorporated Towns either (in order of preference) attend, or have representation, or be regularly informed during the Watershed Planning process. Additionally, the Planning Commission (PC) should be given the opportunity to participate and at a minimum should be kept informed throughout the process.

B. Progress Reports -- The SWMS Team recommends that presentations should be made to the following decision-making bodies throughout the watershed management planning process, in consultation with one or two Supervisors as appropriate. Presentations should reflect high-level County administration support by having the presentations opened by the County Administrator with technical information provided by the Environmental Coordinator or watershed planning program manager, as appropriate.

1. The Board of Supervisors

2. The Planning Commission
3. Incorporated towns (the Coalition of Loudoun Towns (COLT) may be an appropriate venue for these presentations, and it may also be appropriate to provide presentations to joint meetings of Town Councils and Planning Commissions)

XV. Implementation of the Plan

A. Authority for Implementation -- The Plan should specify and clarify who will implement each component of the Plan, by when, and who has designated authority for implementation.

B. Coordination with Towns -- The County will coordinate watershed management with the Towns.

C. Public-Private Partners -- It is important for the County to work with and encourage its private sector partners to continue their ongoing activities in the watersheds throughout both the planning and implementation phases of the watershed management planning process.

D. Implementation Steering Committee -- The SWMS team recommends that the county-wide Stakeholder Steering Committee be continued or a new one established after completion of the Plan to ensure continuing citizen involvement in monitoring and assisting with implementation

XVI. Implementation of the DOC

The SWMS Team recommends that on conclusion of its work, this Declaration of Cooperation be presented to the BOS and incorporated Towns for their review and approval. It should be presented to the Planning Commission and committees listed above (WRTAC, COLT) for their information.

XVII. Evaluation of the Watershed Plan

The SWMS Team agreed that the Watershed Management Plans should include a strategy for revisiting and updating the Plans over time to ensure that they remain living documents. These plan reviews should be conducted by the County in collaboration with the County-wide Stakeholder Steering Committee. An important component for assessing progress in achieving planning goals will be the water quality and stream health data collected under probability and trend monitoring approaches.

XVIII. Issues requiring further discussion

ARE THERE ANY ISSUES REQUIRING FURTHER DISCUSSION???

APPENDIX 1

MODELING

Further Information And Guidance

*MODELING FOR **WATERSHED PLANNING: PHASE I***

1. *Water Quality* ***-- For predicting impacts of different management options on water quality, consider selecting either a basic spreadsheet (such as STEPL) or the slightly more sophisticated Generalized Watershed Loading Function (GWLF) model, both of which will address nitrogen, phosphorous, and sediment. Experience in other localities has shown it is important that whichever model the County selects, the same model be applied across the entire County to ensure consistency of analysis and predictive value.***
2. *Water Quantity* ***-- For predicting impacts of different management options on water quantity, consider selecting a spreadsheet model to do "water balance accounting." It is understood that this would allow the County to make only rough predictive calculations of impacts on water quantity at an early phase of watershed planning. However, as more data is gathered over time, the County may be able to graduate to a more refined model to make more refined calculations.***
3. *Ground Water* ***-- For ground water quality and quantity, the models can offer predictive guidance for nonpoint source pollution and base flow. For predicting impacts of different management options on groundwater, it is recommended that existing data are compiled and analyzed, as much data is already available but has not been analyzed. It is also important that existing data and analyses already undertaken by agencies such as the USGS and DEQ be obtained by the County to avoid duplication of effort. The USGS has agreed to provide input and assistance in the County's modeling and data synchronization efforts. Questions regarding ground water availability are more difficult to quantify with ground water models and require a good conceptual understanding of the groundwater flow system of the area being studied. In Phase I, the County will focus on developing a conceptual understanding of the groundwater flow system.***
4. *Floodplains* ***-- For predicting impacts of different management options on floodplains, consider obtaining existing modeling from FEMA to incorporate into the plan.***

MODELING FOR WATERSHED PLANNING: PHASE II

1. Water Quality and Quantity ***-- For more sophisticated predictions of impacts of different management options on both water quality and quantity, the County should first inventory data available to decide which of the more sophisticated models would be most feasible to use. The current choices are either EPA's dynamic rainfall-runoff simulation model (SWMM) or the Hydrologic Simulation Program-Fortran model (HSPF). Both models are appropriate for Loudoun's mix of urban/rural land use, and could be used to predict nutrients, sediments, as well as flow variation and base***

flow. The HSPF model already has been used to develop two TMDLs for fecal coliform in Loudoun County, and so could be adapted for these broader predictive purposes as well as expanded to provide coverage for the entire County via extrapolation. As a result, the Team suggests that the HSPF might be preferable to the SWMM model, but the County should make this determination when the time is appropriate. The Team also suggests the County consider using a flexible, selective approach in which more sophisticated models would be used for more complex, difficult watersheds.

2. Ground Water ***-- For more sophisticated predictions of impacts of different management options on ground water, the County needs to establish long-term monitoring wells and gauges. When more data becomes available, including geological data, the County could begin to conceptualize its ground water system. The Team recognizes that the movement and availability of ground water is a difficult science, and that it will be at least five years before the a predictive model for ground water can be developed. It is therefore suggested that other tools for decision-making be developed in the near-term. Specifically, the Team recommends that the County consider selecting either the MOD-FLOW or SUTRA 3-D models for use as early as possible in Phase II. Either of these tools can be used to identify: (a) areas at risk of low base flow; and (b) areas important for ground water recharge.***

Modeling for Watershed Planning: Phase III

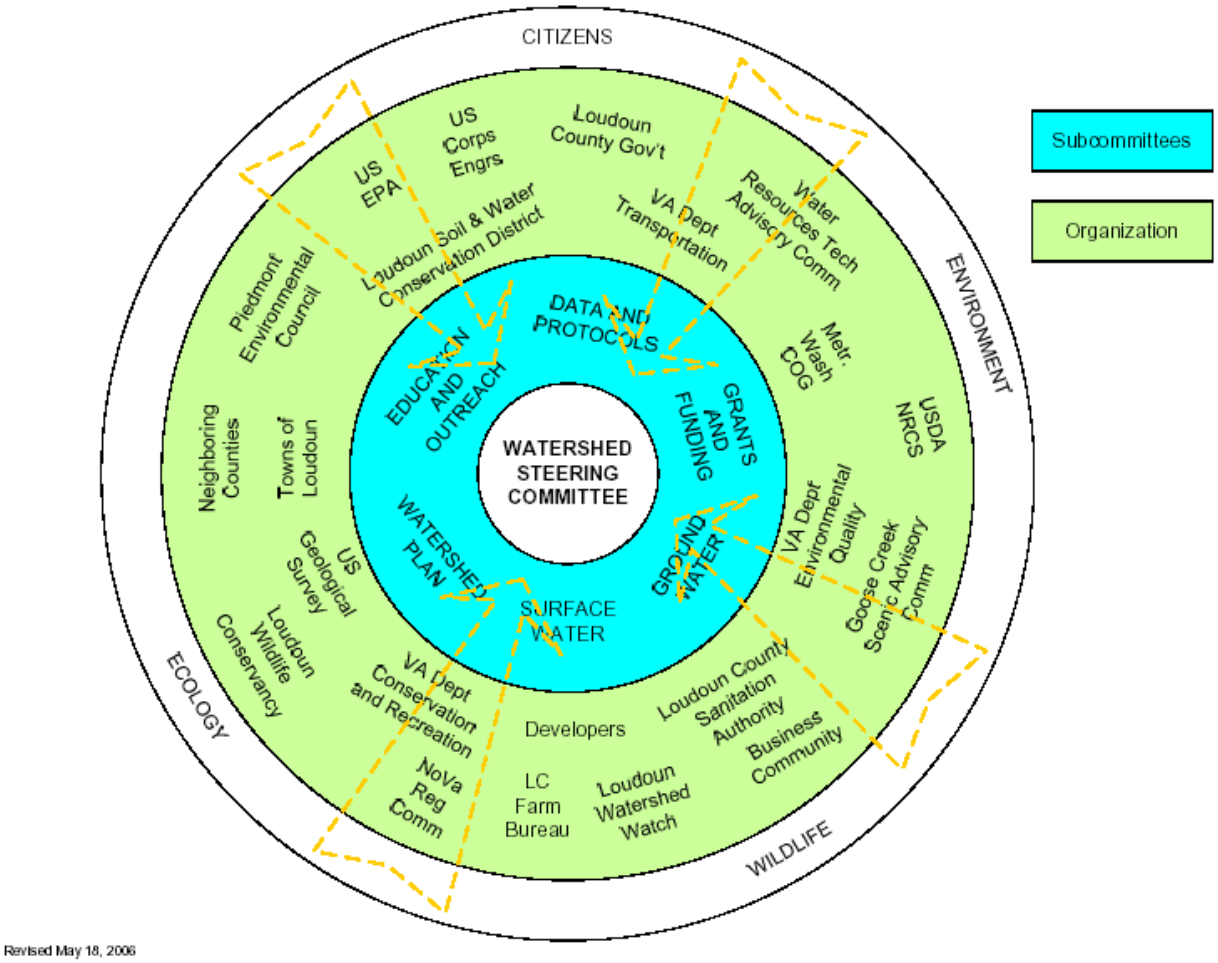
For groundwater, the Team also recommends a later Phase III modeling effort in which the County would eventually develop and use a ground water model that can provide better predictive capability for the availability of groundwater.

APPENDIX 2

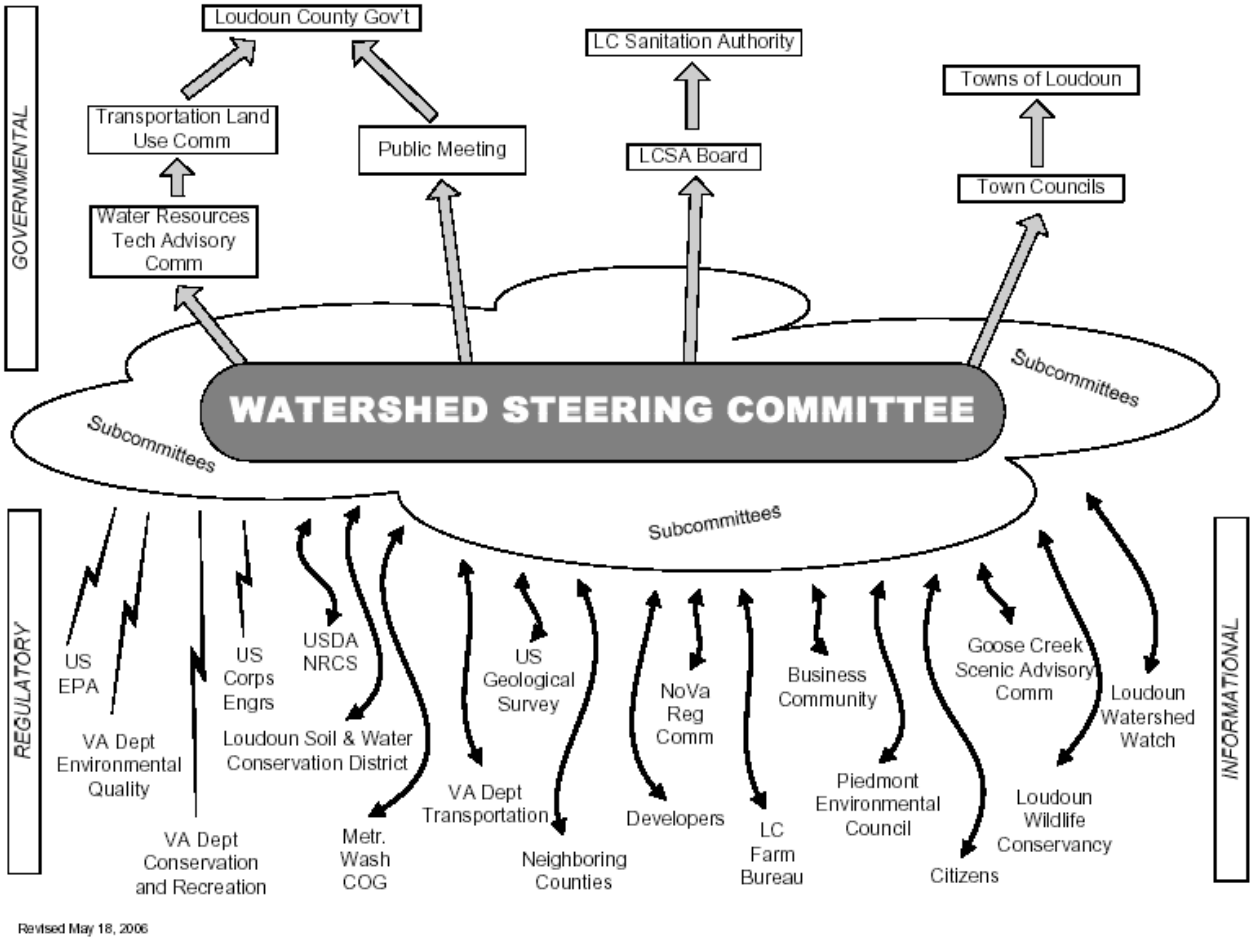
STAKEHOLDER STEERING COMMITTEE

Proposed Composition and

Organizational and Communication Structures



Revised May 18, 2006



Revised May 18, 2006

APPENDIX 3

Signature Pages and Specific Commitments

SIGNATURE PAGES WILL BE INSERTED HERE

Individual Commitments by Members of the SWMS Team

USDA-Natural Resources Conservation Service will provide a staff of one to support the efforts and programs of the local Soil and Water Conservation District and to provide direct technical assistance to the farmers and other landowners in Loudoun Co. We administer or help other USDA agencies administer programs created under the "Farm Bill" that provide technical and /or financial support to landowners in Loudoun County.

_____ _____

NAME, TITLE **Date**

Submitted by Larry Wilkinson, USDA-NRCS

The Goose Creek Association will provide:

- Baseline stream monitoring information, both biological and chemical, for current locations on the Goose Creek and Little River. Additional sites may be added.
- Education Outreach Programs, independently or in conjunction with other conservation organizations such as the Piedmont Environmental Council or Loudoun Watershed Watch, to inform citizens of Best Management Practices to maintain the health of the watershed.

_____ _____

NAME, TITLE **Date**

Submitted by Nancy West, Goose Creek Association

The **Piedmont Environmental Council (PEC)** commits to provide watershed technical support and data; support for citizen/public involvement; education, funding, policy and regulation support.

- Watershed technical support and data
  - Provide GIS data & maps as well as entire body of recommendations to Loudoun County from Goose Creek Assessment work already completed. Provide similar information resulting from the Leesburg project.
  - Provide GIS data to Loudoun County regarding conservation easements and easement monitoring.
- Water Quality
  - Continue to work on obtaining conservation easements in the entire Goose Creek watershed, building on the results & recommendations in the reports.
  - Focus on obtaining landowner commitments to plant riparian buffers & involve Loudoun County Soil & Water Conservation District & NRCS.
  - Encourage landowners to commit to language in easement documents to maintain riparian buffers in the Goose Creek watershed, particularly in those subwatersheds deemed as Rurally Impacted, and High Quality.
  - Work with landowners to identify important natural resources on their property and how the landowners can meet their needs while preserving the resources.
  - Continue to work with Parks & Rec Department to help fill in the blanks on streamside trail connections that they are working to complete.
- Support for Citizen/Public Involvement
  - Help spread the word and work with the grassroots to encourage watershed planning participation. Recruit key volunteers to help lead the effort.
  - Utilize a "neighborhood party" outreach model to work with residents to encourage critical actions to improve watershed water quality.
  - Provide SWMS team interface to County FSMPRC (for the duration of my service).
- Education
  - Help to train volunteers in the Center for Watershed Protection methodologies for stream assessment and associated field work.
  - Continue to encourage schools participation by following the high school involvement model started in Purcellville.
  - Continue to participate in LWW and its Family Stream Day activity to inform younger students and their families.
- Funding
  - Seek grant funding to help support our continued watershed work.
- Policy and Regulation Support
  - Provide SWMS team interface to County FSMPRC (for the duration of my service).
  - Advocate for LID practices and policies which would support the watershed management goals.

_____ _____

NAME, TITLE **Date**

Submitted by Gem Bingol, Piedmont Environmental Council

The **Loudoun Wildlife Conservancy (LWC)**, the largest non-affiliated, all-volunteer conservation organization in Loudoun County, commits to support SWMS in the following areas:

A. Data, study or resource: LWC volunteers will collect data on streams and sites throughout the County. Data includes: number and types of benthic macro-invertebrates, ambient water and air temperatures, PH, Habitat assessments, watershed land use and human impacts. Data will be made available to SWMS members through cooperation with LWW.

B. Education, outreach or project: LWC will: a. Provide knowledgeable volunteers to assist schools, scout groups or other organizations, for education on water quality and stream habitat/assessment issues; b. Provide programs and training to volunteers and interested groups on stream monitoring techniques; c. Develop and publish articles regarding stream quality in our quarterly newsletter, The Habitat Herald; d. Participate in stream/watershed education efforts/initiatives of other groups/agencies (LWW, LSWCD, LCSA, etc.) e. Provide volunteers and other resources for riparian restoration projects. f. Identify trends in water quality and stream health to educate the general public. g. Compile and analyze collected data and provide summary information to LWC monitors and the general public. h. Provide educational materials on water quality, stream health, pollution prevention and environmental stewardship.

C. Land Use Planning and Policy: LWC will provide advice/input to County BOS, Planning Commission, staff, and Landowners regarding the importance of, and need for, protecting stream corridors and floodplains for the benefits of wildlife and human passive recreation.

D. Stream Monitoring: LWC will continue to provide a cadre of trained volunteers for stream monitoring in accordance with a modified EPA Rapid Bioasessment II, or other aproved, methodology. LWC also commits to expanding its program to include other parameters and locations when time, training and funding permit. Our commitment includes: a. Recruitment and training of team leaders and citizen volunteers. b. Providing and maintaining stream quality equipment and supplies. c. Collecting data that includes physical, chemical, biological, habitat parameters and land use activities. d. Develop, implement and maintain an approved quality assurance program.

_____ _____

Nicole Hamilton, President, LWC **Date**

_____ _____

Philip Daley, LWC's SWMS Rep **Date**

Loudoun Watershed Watch (LWW) fully supports the Loudoun Strategic Watershed Management Solutions (SWMS) initiative to coordinate existing watershed planning efforts and affect a shared vision for watershed activities in Loudoun County. Historically, Loudoun County has done little watershed management planning. All Loudoun streams are impacted to some degree by human activities. Several are degraded to the degree that they do not meet either Federal Clean Water Act or Virginia Water Quality Standards for recreational use and aquatic life. Portions of streams that have been designated as impaired by the state include: Catoctin Creek and its tributaries, Goose Creek and its tributaries, Little River, Limestone Branch, Piney Run, Broad Run, and Sugarland Run.

State water pollution reports (i.e., DEQ's Integrated Report and Total Maximum Daily Load reports) document that nonpoint pollution is the major cause of fecal bacteria pollution in Loudoun streams. Past initiatives to encourage landowners to voluntarily install BMPs, such as fencing-off streams to livestock, have had limited success. All major Loudoun watersheds are impacted by pollution from agricultural activities. In addition, TMDL reports for Goose Creek and Little River document that sediment from stream bank erosion and wash off from pastureland are a major cause of stream degradation. DEQ estimates that 68,000 tons of sediment is flowing into the Potomac River from Goose Creek every year. Further, DEQ estimates that a 6% increase in developed land will increase sediment loads from stream bank erosion another 36%.

Unfortunately, Loudoun County water resource programs are divided between a variety of County authorities, and there is little community and citizen investment. There are no countywide or watershed based plans to manage, protect, or restore degraded water resources. Rather programs are administered on a case-by-case, site-specific basis. Resources are used inefficiently, results are ineffective, and damages to private property are increasing. The SWMS initiative provides the opportunity to engage in countywide planning that will improve water quality and public health, provide economic opportunities for agriculture and tourism, protect the health of streams for aquatic life and riparian buffers for wildlife, promote the conservation of natural resources, and create additional recreational opportunities for all citizens. These benefits can be achieved in a cost-effective manner through phasing watershed planning activities, establishing priorities for protection and restoration projects, and better integrating water resource protection with county policies, codes, and ordinances.

Loudoun Watershed Watch commits to supporting the SWMS initiative in four ways:

1. **SWMS Initiative** -- LWW is one of many stakeholders in Loudoun that support watershed management planning and the Total Maximum Daily Load (TMDL) Implementation Planning initiatives. These stakeholders only lack a County-sanctioned authority that can organize and lead a collaborative County-Stakeholder initiative to compile and analyze water resource data and develop watershed management plans that address the objectives of the larger Potomac River and Chesapeake Bay watersheds initiatives. LWW also recognizes that subwatersheds provide homogeneous management areas and are probably the best units to use to develop effective management plans. Small subwatersheds will also facilitate timely monitoring, mapping, and other management tasks.
    a. A representative of LWW will continue to work with SWMS, the Loudoun County, and other authority with responsibilities for implementing a workable watershed management planning process and developing watershed management plans.
    b. LWW will continue to provide technical and management advice and support for the initiative as needed.
    c. LWW will continue to encourage and organize citizen involvement in the SWMS initiative by promoting citizen participation, contributing volunteer resources, and encouraging citizen support for water resource conservation policies and practices.

2. **Stream Monitoring** -- Effective watershed management planning depends upon good water resource and water quality data collected from both probabilistic and trend stations. These

data need to be collected using sampling protocols that will ensure that future monitoring data will be fully compatible with existing baseline data and state data. Data collected under these guidelines can provide timely feedback on how stream habitats and biological communities are responding to the management practices outlined in the watershed plans.

a. LWW will provide technical expertise and collaborate to develop and maintain stream monitoring and habitat assessment protocols that meet the SWMS initiative goals.
b. LWW will provide technical expertise, and will collaborate to develop a comprehensive surface water monitoring plan that includes both probabilistic and trend monitoring.
c. LWW will continue to work in partnership with Loudoun Wildlife Conservancy to monitor the quality and health of streams.
d. LWW will continue to make public its water quality monitoring data, analyses, and assessment reports on Loudoun streams.

3. **Community Outreach and Education** -- Successful watershed management planning in Loudoun County also depends on people valuing clean water and healthy streams, and contributing to the watershed plan implementation activities needed to protect and restore the County's water resources. LWW supports the SWMS planning goals that involve citizens and other stakeholders in the development of the Watershed Management Plans in order to enhance the plan's value to citizens.

    a. LWW will collaborate with County authorities and other stakeholder groups to continue to develop educational materials on the conservation of water resources in Loudoun County.
    b. LWW will collaborate with County authorities and other stakeholder groups to continue to organize community outreach and stewardship projects to engage citizens and communities in water quality protection and restoration activities.
    c. LWW will continue to provide a website that offers educational materials on water resources protection and restoration to Loudoun County citizens.

4. **Program Evaluation and Adaptive Management** – The effectiveness of a watershed management planning initiative for Loudoun County will be measured by the degree to which good quality streams are protected and streams of marginal quality are restored. Policy and management approaches and strategies to accomplish this will need to adapt to changing conditions over time and to problems identified in periodic assessments of accomplishments.
    a. LWW will collaborate with County authorities and other stakeholder groups to collect and analyze data that can be used to assess progress under the watershed management planning initiative to protect and restore our water resources.
    b. LWW will work with the Steering Committee and provide management expertise to County authorities to make adaptations in the SWMS process and watershed plan as needed.

_____ _____

NAME, TITLE **Date**

Submitted by Darrell Schwalm, Loudoun Watershed Watch

Virginia Department of Environmental Quality -- Northern Virginia Regional Office

The Virginia Department of Environmental Quality (DEQ) supports the development of a strategic plan for watershed management as envisioned by the Loudoun County Strategy for Watershed Management Solutions (SWMS) participants. The Department recognizes the future challenges that project stakeholders face in the development and implementation of a watershed management plan that works to improve regional water quality in Loudoun County.

In the spirit of collaboration and cooperation, the Northern Virginia Regional Office of the DEQ offers to support the project in the following manner, granted that Commonwealth resources allow for such commitments:

- Provide available water quality data to the team as may be needed in support of defining baseline ambient stream conditions;
- Participate as needed or requested in future meetings of the partnership;
- Conduct and electronically publish Total Maximum Daily Load studies initiated for streams to attain water quality standards;
- Assist in educational outreach efforts designed to engage members of the community to meet project goals and to market the program;
- Offer any other appropriate technical assistance in support of the project.

_____ _____

Jeffery A. Steers, **Date**
Regional Director
Virginia DEQ Northern Regional Office

The **Audubon Naturalist Society** will continue to support volunteer water quality monitoring activities in Loudoun County through monitor training, monitoring equipment, storage, and technical guidance. We will also participate in local watershed education activities such as stream walks and slide presentations.

_____ _____

NAME, TITLE **Date**

Submitted by Cliff Fairweather

The **Goose Creek Scenic River Advisory Committee** (GCSRAC) fully supports the Loudoun Strategic Watershed Management Solutions (SWMS) initiative to coordinate the many diverse watershed stakeholders in Loudoun County in order to effect a coordinated County-wide program to protect this watershed and insure its future life and potability.

To that end the Goose Creek Scenic River Advisory Committee will commit to offering its support to establishing a meaningful county program that protects and enhances the watershed.

In our work, the Goose Creek Scenic River Advisory Committee will continue to work with riparian landowners along Goose Creek to establish riparian setbacks and other water-cleansing methods to protect the water.

Where possible we will also commit to educating the public in good water husbandry.

We will also continue to work with SWMS as necessary and support testimony before the County Planning Commission and/or County Board of Supervisors in order to create a meaningful new county ordinance to protect Loudoun?s waters for the future.

_____ _____

NAME, TITLE **Date**

Submitted by Helen Casey